

USSN.: 09/863,379
 Examiner: Massarotto Luigi
 Group A.U.: 1732
 May 21, 2004

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method for continuous production of expanded plastic material for forming panels comprising: providing an apparatus for continuous production of expandable plastic material which includes a pouring channel, two injection assemblies, a high pressure pump, and a mixing head; a pouring step, in which at least one reaction component and a mixture of remaining components for obtaining the expandable plastic material are introduced[,] at high pressure in said pouring channel by way of said two injection assemblies, said mixture being ~~provided~~ formed downstream of said high-pressure pump; a pouring hold step; and a recirculation step, and wherein during the pouring hold step said remaining components of the mixture are individually placed in the recirculation step.

2. (Original) The method of claim 1, comprising the step of providing said at least one reaction component constituted by isocyanate and said mixture of the remaining components constituted by polyol mixed with blowing agents, and catalysts.

3. (Original) The method of claim 2, comprising providing said apparatus with a first delivery branch, a second delivery branch which is distinct and separate from the first delivery branch, and a mixer arranged at the second delivery branch, said polyol being fed during the recirculated step by way of said first delivery branch.

4. (Original) The method of claim 3, comprising providing said apparatus with at least one duct for introducing blowing agents, and catalysts which merges onto said mixer, the polyol being introduced, during said pouring step, in said second delivery branch in order to flow through the mixer.

5. (Original) The method of claim 4, comprising providing one-way valves on said first and second delivery branches of said apparatus, said first delivery branch and said second delivery branch merging close to said mixing

USSN.: 09/863,379
 Examiner: Massarotto Luigi
 Group A.U.: 1732
 May 21, 2004

head.

6. (Original) The method of claim 5, comprising the step of recirculating said blowing agents and catalysts before they are introduced in said mixer.

7. (Original) The method of claim 5, comprising providing a polyol storage tank for said apparatus and wherein, during the recirculation step, the polyol is returned to the polyol storage tank.

8. (Original) The method of claim 5, comprising a transition step between the recirculation step and the pouring step, in which the pouring channel located in the mixing head is opened and passage toward said second branch is first opened to the polyol and then passage through said first branch is closed, the remaining components of the mixture being introduced after passage of the polyol in the mixer.

9. (Original) The method of claim 8, wherein during the transition step between the pouring step and the recirculation step, flow of the polyol through said mixer is interrupted after the at least one duct for introducing the blowing agents, and catalysts has been set to recirculation.

10. (Withdrawn from consideration)

11. (Withdrawn from consideration)

12. (Withdrawn from consideration)

13. (Withdrawn from consideration)

14. (Withdrawn from consideration)

15. (New) A method for continuous production of expanded plastic material for forming panels comprising: providing an apparatus for continuous production of expandable plastic material which includes a pouring channel, two injection assemblies, a high pressure pump, and a mixing head; a pouring step, in which at least one reaction component and a mixture of remaining components for obtaining the expandable plastic material are introduced at high pressure in said pouring channel by way of said two injection assemblies, said mixture being formed downstream of said high-pressure pump; a pouring hold step; and a

USSN.: 09/863,379
 Examiner: Massarotto Luigi
 Group A.U.: 1732
 May 21, 2004

recirculation step, and wherein during the pouring hold step said remaining components are individually placed in the recirculation step, said remaining components comprising blowing agents and catalysts, the method comprising the step of recirculating said blowing agents and catalysts before said mixture is formed.

16. (New) A method for continuous production of expanded plastic material for forming panels comprising: providing an apparatus for continuous production of expandable plastic material which includes a pouring channel, two injection assemblies, a high pressure pump, and a mixing head; a pouring step, in which at least one reaction component and a mixture of remaining components for obtaining the expandable plastic material are introduced at high pressure in said pouring channel by way of said two injection assemblies, said mixture being formed downstream of said high-pressure pump; a pouring hold step; and a recirculation step, and wherein during the pouring hold step said remaining components are individually placed in the recirculation step, wherein said at least one reaction component is constituted by isocyanate and said mixture of the remaining components is constituted by polyol mixed with blowing agents, and catalysts, said apparatus having a first delivery branch, a second delivery branch which is distinct and separate from the first delivery branch, and a mixer arranged at the second delivery branch, said polyol being fed during the recirculated step by way of said first delivery branch, said apparatus having at least one duct for introducing blowing agents, and catalysts which merges onto said mixer, the polyol being introduced, during said pouring step, in said second delivery branch in order to flow through the mixer, one-way valves being provided on said first and second delivery branches of said apparatus, said first delivery branch and said second delivery branch merging close to said mixing head, and comprising the step of recirculating said blowing agents and catalysts before they are introduced in said mixer.